(30)

2800 Quebec Street, N. W.
Apt. 1217
Washington 8, D. C.

29 December 1952

Professor J. Allen Hynek
Graduate School
The Ohio State University
Columbus 10, Ohio

Dear Professor Hynek:

Thank you very much indeed for your letter of 23 December confirming the astronomical calculations transmitted earlier by telephone. We are in agreement with your findings and appreciate your assistance in this matter.

It was a pleasure to renew our acquaintence at Dayton and to learn of your consultant work. I hope that we shall see you again in the not too distant future.

With best wishes for the coming year,

Cordially yours,

H. Marshall Chadwell

Distribution:
Opns/SI - 3
AD/SI - 1

CSI:FCDurant/mtw (29Dec52)

C00015284

THE OHIO STATE UNIVERSITY
Howard L. Bevis, President
COLUMBUS 10

GRADUATE SCHOOL
Office of the Dean

December 23, 1952

Dr. H. M. Chadwell
Apt. 1217
2800 Quebec Street, N. W.
Washington 8, D. C.

Dear Dr. Chadwell:

In pursuance of our telephone conversation of the other day, and in accordance with your request, I am confirming in writing the results I transmitted to you over the phone.

It is well known that in theodolite observations, elevations can be generally obtained more accurately than the azimuths since the former depend only on accurate leveling but the latter depend upon a determination of the true north. Since most theodolite observers are interested in relative rates and not in absolute positions, it is no surprise that they do not pay too much attention to the exact determination of their zero points. Further, it is quite easy for even an observer of some experience to make an error in reading of some multiple of whole degrees. The observation made at Limestone, therefore, can very well be assumed to have both a zero point error and an incorrect scale reading.

At the mean time of observation, calculations made at the observatory here show that Jupiter had, at Presque Isle, an azimuth of 163° and an elevation of 58.5°. This alone is sufficiently close to the mean of the readings from two stations to serve as strong evidence that the object observed was Jupiter. However, the clinching argument comes when one compares Jupiter's rate of motion in elevation and azimuth during the observation and the rates noted on the theodolite, at Presque Isle. The computed increment in elevation was 0.2 degrees (as compared to the observed 0.3 degrees) and the corresponding increment in azimuth was 1.8 degrees (as against the observed 1.9 degrees). In view of this strikingly close agreement in rates as well as general position in the sky, it would be an outrage to probability theory to consider that the object observed was anything other than the time-honored planet Jupiter. The prosecution rests its case!

Wishing you the very best greetings of the season, I remain,

Sincerely yours,

J. Allen Hynek

J. Allen Hynek
Assistant Dean and
Professor of Astronomy

JAH/n